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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,002	04/08/2004	Joachim Bormuth	85934.000036	9301

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EXAMINER

ZACHARIA, RAMSEY E

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 09/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/821,002

Applicant(s)

BORMUTH ET AL.

Examiner

Ramsey Zacharia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/28/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: "a" in Figure 2. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The specification is objected to because of informalities such as: the phrase "hydrated nitrile rubber" in the abstract and throughout the specification (e.g. paragraph 0015 on page 3) should be --hydrogenated nitrile rubber--.

The applicant is requested to review the application thoroughly and make all appropriate corrections.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. The phrase "hydrated nitrile rubber" on lines 6-7 of independent claims 1 and 2 render the claims (and those depending from claims 1 and 2) indefinite because the meaning of this phrase is unclear. For the purpose of examination, the phrase is taken to mean *hydrogenated* nitrile rubber since the instant specification refers to "hydrated nitrile rubber" as HNBR (see paragraph 0015 on page 3) and HNBR is the common abbreviation for hydrogenated nitrile rubber (see entry for hydrogenated nitrile rubber in Polymer Science Dictionary).

7. Claim 3 recites the limitation "said second cross-linkable polymer material" in line 3 of the claim. There is insufficient antecedent basis for this limitation in the claim. It is noted that

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claim 3 depends from independent claim 1, while the second cross-linkable polymer material is introduced in independent claim 2.

8. Claim 4 recites the limitation "said first cross-linkable polymer material" in lines 2-3 of the claim. There is insufficient antecedent basis for this limitation in the claim. It is noted that claim 4 depends from independent claim 2, while the first cross-linkable polymer material is introduced in independent claim 1.

9. Regarding claims 5, 6, 9, and 10, the phrase "preferably" renders the claims indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. For the purpose of examination, the limitations following the phrase are not taken to be required parts of the claimed invention.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1, 3, 5, 7, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Horiuchi et al. (JP 62-258263 A).

Because an English language translation of JP 62-258263 A was unavailable at the time of this action, the JPO and Derwent abstracts of JP 62-258263 A have been attached.

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Horiuchi et al. teach a diaphragm comprising a blended rubber layer and a rubber layer. The blended rubber layer comprises 43-60 wt% of NBR and 25-95 wt% of fluororubber. The rubber layer comprises NBR.

The limitation "in laminators for the production of photovoltaic cells" is taken to be an intended use of the diaphragm. It has been held that a recitation with respect to the manner in which a claimed product is intended to be employed does not differentiate the claimed product from a prior art product satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

12. Claims 2 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Hotta (JP 60-141738 A).

Because an English language translation of JP 60-141738 A was unavailable at the time of this action, the JPO and Derwent abstracts of JP 60-141738 A have been attached.

Hotta teaches a rubber composition suitable as a base for a diaphragm comprising a blend of a hydrogenated nitrile rubber and a fluorosilicone. The blend comprises 100 parts by weight of the nitrile rubber and 25-65 parts by weight of the fluorosilicone, i.e. about 60-80 wt% of nitrile rubber and 40-20 wt% of fluorosilicone.

The limitation "in laminators for the production of photovoltaic cells" is taken to be an intended use of the diaphragm. It has been held that a recitation with respect to the manner in which a claimed product is intended to be employed does not differentiate the claimed product from a prior art product satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

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Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 2, 4, 6, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okumoto et al. in view of Hotta (JP 60-141738 A).

Okumoto et al. teach a diaphragm comprising two layers of partially hydrogenated NBR (column 1, lines 48-54).

Okumoto et al. do not teach the incorporation of a fluorosilicone into at least one of the NBR layers.

Hotta teaches a rubber composition suitable as a base for a diaphragm comprising a blend of a hydrogenated nitrile rubber and a fluorosilicone. The blend comprises 100 parts by weight of the nitrile rubber and 25-65 parts by weight of the fluorosilicone, i.e. about 60-80 wt% of nitrile rubber and 40-20 wt% of fluorosilicone. The blend has high gasoline resistance.

One skilled in the art would be motivated to add a 20-40 wt% of fluorosilicone to the NBR of Okumoto et al. to yield a diaphragm having high gasoline resistance.

The limitation "in laminators for the production of photovoltaic cells" is taken to be an intended use of the diaphragm. It has been held that a recitation with respect to the manner in which a claimed product is intended to be employed does not differentiate the claimed product from a prior art product satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

15. Claims 1, 3, 5, 7, 9, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nath et al. (U.S. Patent 5,238,519) in view of Horiuchi et al. (JP 62-258263 A).

Nath et al. teach a solar cell lamination device (column 1, lines 8-15). The device comprises a diaphragm, such as a rubber diaphragm (column 10, lines 16-19).

Nath et al. do not teach the composition of the diaphragm except that it is rubber.

Horiuchi et al. teach a diaphragm comprising a blended rubber layer and a rubber layer. The blended rubber layer comprises 43-60 wt% of NBR and 25-95 wt% of fluororubber. The rubber layer comprises NBR.

It would be obvious to one skilled in the art to use the rubber diaphragm of Horiuchi et al. as the diaphragm in the device of Nath et al. because the selection of a known material based on its suitability for its intended use supports a *prima facie* obviousness determination. See MPEP 2144.07.

16. Claims 2, 8, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nath et al. (U.S. Patent 5,238,519) in view of Hotta (JP 60-141738 A).

Nath et al. teach a solar cell lamination device (column 1, lines 8-15). The device comprises a diaphragm, such as a rubber diaphragm (column 10, lines 16-19).

Nath et al. do not teach the composition of the diaphragm except that it is rubber.

Hotta teaches a rubber composition suitable as a base for a diaphragm comprising a blend of a hydrogenated nitrile rubber and a fluorosilicone. The blend comprises 100 parts by weight

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of the nitrile rubber and 25-65 parts by weight of the fluorosilicone, i.e. about 60-80 wt% of nitrile rubber and 40-20 wt% of fluorosilicone.


It would be obvious to one skilled in the art to use the rubber diaphragm of Hotta as the diaphragm in the device of Nath et al. because the selection of a known material based on its suitability for its intended use supports a *prima facie* obviousness determination. See MPEP 2144.07.

Conclusion

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Zacharia whose telephone number is (571) 272-1518. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney, can be reached at (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ramsey Zacharia
Primary Examiner
Tech Center 1700